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LISTS OF SPECIES

Birds, Montane forest, State of Rio de Janeiro, Southeastern Brazil

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Abstract
Field surveys in montane Atlantic forest of Rio de Janeiro state, Brazil, provided a list of 82 bird species in four sites visited. Our protocol relied on standardized use of mist nets and observations. The birds recorded include 40 Atlantic forest endemics, three globally and two nationally Vulnerable species, and two regionally Endangered species. Data on species elevation are included and discussed. This work enhances baseline knowledge of these species to assist future studies in these poorly understood, but biologically important areas.

Introduction
The Atlantic forest is a global priority for conservation (Myers et al. 2000). Rio de Janeiro state resides in this biome, and has more threatened birds than anywhere else in the continental Americas (Manne et al. 1999; Harris et al. 2005; Jenkins and Pimm 2006).

However, some habitats of the Atlantic forest are poorly known, such as the montane forests, including the elfin forests that hold such rare Atlantic forest endemics as the Grey-winged Cotinga (*Tijuca condita* Snow, 1980), which may be at risk from climate change that could cause habitat displacement.

The Grey-winged Cotinga, endemic to the state of Rio de Janeiro, was the target of a recent expedition into the montane forests of the region (Alves et al. 2008). That expedition doubled the known number of localities of this species, and produced many new records for other Atlantic forest birds. Here, we provide a list of the species recorded during surveys of the mountains of Rio de Janeiro, including the elfin forest habitat of *T. condita*.

Study site and Methods
Field surveys: Field surveys took place mainly in the steep central mountains of Rio de Janeiro state

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(Figure 1). This region retains good quality forest, including elfin forest, and has the most continuous well-preserved remnant of Atlantic forest in the state. Surveys occurred at four locations, each of which had montane forest, and usually elfin forest.

Araras Biological Reserve is a state conservation unit located between *Serra dos Órgãos* National Park and *Serra do Tinguá* Biological Reserve (Figure 1). *Fazenda Itatiba* is within *Três Picos* State Park. Both sites are part of the Montane Central Region, covered mainly by Montane Atlantic Forest. The *Fazenda Boa Esperança* site is between *Três Picos* and *Desengano* State Park, but more than 30 km from both of these protected areas. The *Desengano* State Park is located more than 50 km from all other sites, with the forest being currently isolated due to deforestation in surrounding areas. All of these sites are part of a once continuous forest with one of the highest biodiversity levels in the world (Rocha et al. 2003), including many threatened species (Alves et al. 2000).

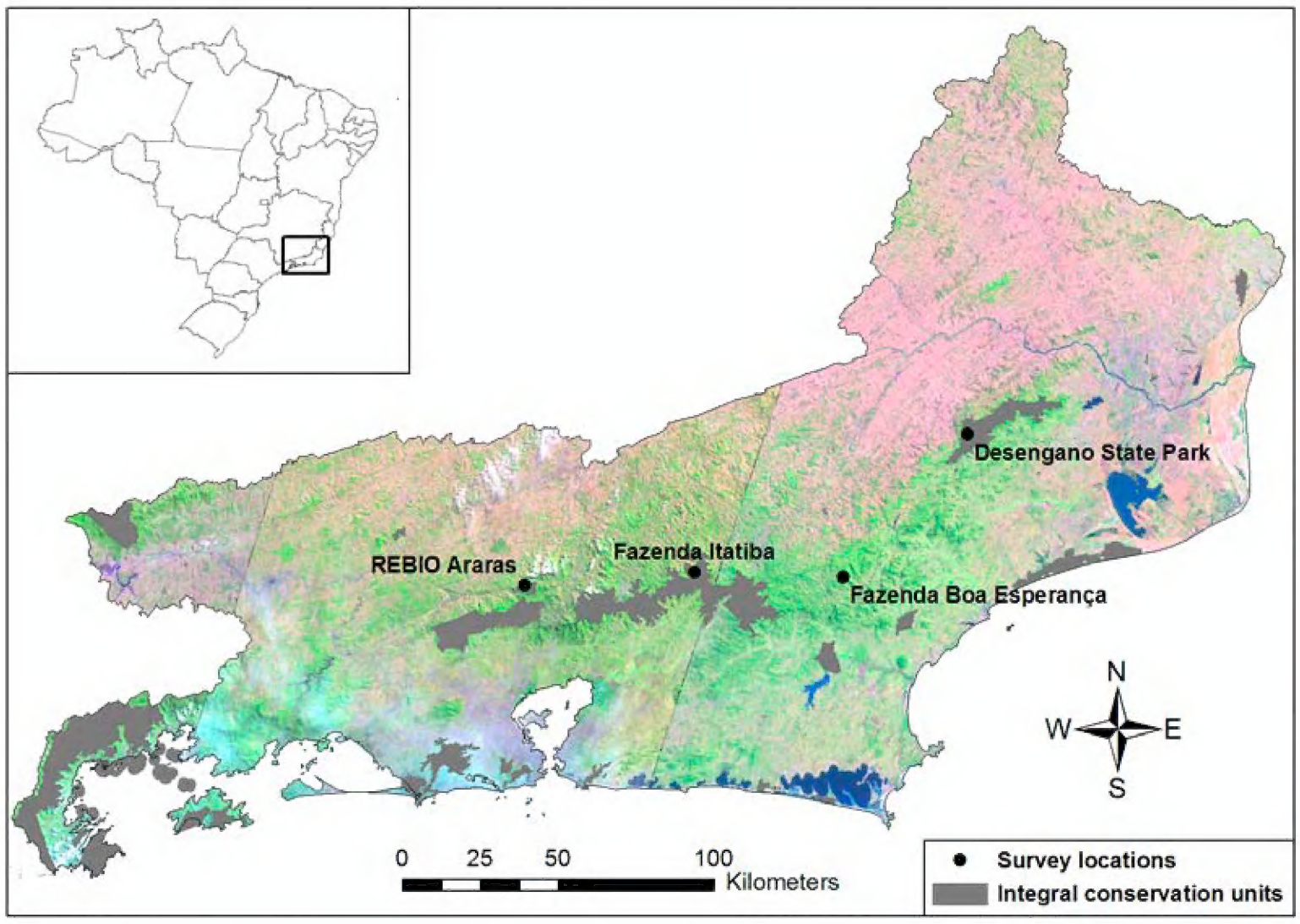

Figure 1. Survey sites in state of Rio de Janeiro and protected areas considered by the Brazilian government to have "Integral" protection.

All sites were difficult to access. We traveled as close as possible by car and reached the actual survey sites by helicopter. Surveys took place in December 2003. Field teams contained three to four people per site. The dates and the initials of the authors surveying each site are in parentheses: Araras Biological Reserve (12-14 December 2003, MASA, MAR, MdeLB, AS). Fazenda Itatiba (5-8 December 2003, MASA, SLP, AS), Fazenda Boa Esperança (18-20 January 2003, MASA, AS), Desengano State Park (16-18 December 2003, MASA, MAR, MdeLB, AS). In the last site, the team left after *c.* 40 hours due to inclement weather. In Itatiba, we spent an extra day also due to bad weather. Surveys included visual searches, mist netting, and audio recordings, all geo-referenced using GPS. Each site had altitudinal records taken using a hand pocket altimeter. We used standardized field protocols in each site. Five mist nets (12 x 2.5 m, 32 mm mesh) were exposed for 7 hours per day starting in early morning on two subsequent days,

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with a total of 14 hours per site (except in *Desengano*, where due to bad weather we had only 4 hours of nets exposed on the first day). The birds captured were banded with rings donated by *Centro Nacional de Pesquisa para Conservação das Aves Silvestres* (CEMAVE). No birds were collected. Tape recordings and playback of species were made using a SONY TCM 5000 EV tape recorder with a uni-directional microphone Sennheiser ME66. We also used an iPod to help with bird sound identification in the field. The audio recordings will be deposited in *Laboratório de Bioacústica da Universidade Federal do Rio de Janeiro*.

We obtained digital maps of protected areas for the region from IBAMA (2008). We categorized species' threat status using the IUCN Red List (IUCN 2007), the Brazilian Red List (Machado et al. 2005) and the Rio de Janeiro Red List (Alves et al. 2000) of Threatened Species.

Permits came from *Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis* (IBAMA) for federal protected areas (No. 206/2003, process 02001.003869/2003-82), *Instituto Estadual de Florestas* (IEF) for state-run ones (ofício/IEF/PR/#1605 - 23 Oct. 2003), *Centro Nacional de Pesquisa para Conservação das Aves Silvestres* (CEMAVE/IBAMA) for ringing birds (No. 028/03), *Conselho Nacional de Desenvolvimento Científico e Tecnológico* (CNPq - CMC 016/03) and *Ministério da Ciência e Tecnologia* (*Portaria* No. 856, 27 Nov 2003) for international participation in the research.

Results and Discussion

In the four sites, we found a total of 82 species, with 40 Atlantic forest endemics, three Vulnerable, and six Near-threatened species at a global level; two Vulnerable species at the national level; two Endangered, and four Probably Endangered species at the regional level. At Araras we recorded 46 bird species (21 endemics, two Vulnerable), at Fazenda Itatiba, 21 species (10 endemics, one Vulnerable), at Fazenda Boa Esperança, 35 species (19 endemics), and at Desengano State Park 35 species (17 endemics, one Vulnerable). The full list of species for each site is in Table 1. While the total number of species recorded in the four sites may appear low, one must consider that high altitudes hold less area, and therefore are predicted to have lower numbers of species due to the species-area relationship (Pimm and Askins 1995).

Araras had the highest total number of species and threatened species, including *T. condita* and *Sporophila frontalis* (Verreaux, 1869). This was one of only two records of *T. condita* outside the sites of the original expedition that discovered this species in the wild (Scott and Brooke 1993), and it was recorded within the expected altitudinal range (Alves et al. 2008). For 12 species, the present study recorded the altitudinal range of species to elevations more than 200 meters higher than those published in Parker et al. (1996), with nine of them recorded more than 300 meters higher: *Tinamus solitarius* (Vieillot, 1819), *Pionus maximiliani* (Kuhl, 1820), *Veniliornis maculifrons* (Spix, 1824), *Drymophila malura* (Temminck, 1825), *Procnias nudicollis* (Vieillot, 1817), *Schistochlamys ruficapillus* (Vieillot, 1817), *Pyrrhocoma ruficeps* (Strickland, 1844), *Tachyphonus coronatus* (Vieillot, 1822), and *Saltator similis* d'Orbigny & Lafresnaye, 1837 (Table 1). For one species, *Oreophylax moreirae* (Miranda-Ribeiro, 1906), the range was recorded to a lower elevation (191 m below the 2000 m cited in Parker et al. 1996). However, Mello-Junior et al. (1998), recorded *O. moreirae* at 1850 m (range 1850 to 2000 m), a similar elevation to where we recorded the species in the present study, and this information is also included in del Hoyo et al. (2003). Although the Parker at al. database is sometimes questioned in terms of up to date sources of altitudinal data, other comparably thorough databases for birds are unavailable, with more recent records for species usually scattered in the literature. Therefore, we used Parker's et al. (1996) database as a first reference.

For the 13 species previously mentioned as having extensions to their elevation range, we include data from Parker et al. (1996) and other elevation references for those species in Table 2. We did not find information for every species in the volumes of Handbook of the Birds of the World or in Ridgely and Tudor (1989, 1994). Buzzeti (2000) and Scott and Brooke (1985) had elevation data

for most of the species in Table 2 and their database was obtained in the state of Rio de Janeiro.

Our elevation data was similar to one or more references included in Table 2 for most species: *T. solitarius*, *P. maximiliani, V. maculifrons, D. malura*, *O. moreirae, S. ruficapillus, T. coronatus, Thraupis cyanoptera* (Vieillot, 1817) and *S. similis*. However, for *Synallaxis ruficapilla* Vieillot, 1819, *Procnias nudicollis*, *Ilicura militaris* (Shaw & Nodder, 1809) and *P. ruficeps* our elevation records were 200 m or higher, in comparison with those references and Parker et al. (1996).

In Rio de Janeiro, montane and elfin forests exist as small islands at high elevations. They house many Atlantic forest endemic birds, including some restricted only to the highest elevations, such as *T. condita* (Alves et al. 2008). In this state, as in many tropical locations, a major obstacle to protecting biodiversity is our rudimentary understanding of where species live. It is likely that these four sites, and forests with similar characteristics, hold other endemic plant and animal species new to science or with unexpected distributions. Our efforts contribute towards filling the distributional gaps. Our data may also allow the monitoring of changes in altitudinal range caused by climate change.

Acknowledgments

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Literature cited

Alves, M. A. S., J. F. Pacheco, L. P. Gonzaga, R. B. Cavalcanti, M. Raposo, C. Yamashita, N. C. Maciel, and M. Castanheira. 2000. Aves; p. 113-124 *In* H. G. Bergallo, C. F. D. Rocha, M. A. S. Alves, and M. Van Sluys (ed.). A Fauna ameaçada de extinção do Estado do Rio de Janeiro. Rio de Janeiro: Editora da Universidade do Estado do Rio de Janeiro (EdUerj).

Alves, M. A. S., S. L. Pimm, A. Storni, M. A. Raposo, M. de L. Brooke, G. Harris, A. Foster, and C. N. Jenkins. 2008. Mapping and exploring the distribution of a threatened bird, Grey-winged Cotinga. Oryx 42(4): 562-566.

Bencke, G. A., G. N. Maurício, P. F. Develey, and J. M. Goerk (org.). 2006. Áreas importantes para conservação das aves no Brasil. Parte I – Estados do domínio da Mata Atlântica. São Paulo: SAVE Brasil. 494 p.

Buzzeti, D. R. C. 2000. Distribuição altitudinal de aves em Angra dos Reis e Parati, sul do Estado do Rio de Janeiro, Brasil; p.131-148 *In* M. A. S. Alves, J. M. C. Silva, M. Van Sluys, H. G. Bergallo, and C. F. D. Rocha (ed.). A Ornitologia no Brasil: pesquisa atual e perspectivas. Rio de Janeiro: Editora da Universidade do Estado do Rio de Janeiro (EdUerj).

Comitê Brasileiro de Registros Ornitológicos (CBRO). 2008. Listas das aves do Brasil. Version 5/10/2008. Accessible at http://www.cbro.org.br. Captured on February 2009.

del Hoyo, J., A. Elliott, and J. Sargatal (ed.). 1997. Handbook of the Birds of the World. Vol. 4. Sandgrouse to Cuckoos. Lynx Edicions, Barcelona.

del Hoyo, J., A. Elliott, and D.A. Christie (ed.). 2003. Handbook of the Birds of the World. Vol. 8. Broadbills to Tapaculos. Barcelona: Lynx Editions.

del Hoyo, A. Elliott, and Christie, D.A. (ed.) 2004. Handbook of the Birds of the World. Vol. 9, Cotingas to Pipits and Wagtails. Barcelona: Lynx Editions.

Harris, G. M., C. N. Jenkins, and S. L. Pimm. 2005. Refining biodiversity conservation priorities. Conservation Biology 19(6): 1957-1968.

IBAMA - Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis. 2008. SisCom, Sistema Compartilhado de Informações Ambientais. Accessible at http://siscom.ibama.gov.br. Captured on January 2008.

IUCN. 2007. IUCN Red List of Threatened Species. Electronic Database accessible at http://www.iucnredlist.org, Captured on September 2007.

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ISSN: 1809-127X

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Jenkins, C. N. and S. L. Pimm. 2006. Definindo prioridades de conservação em um Hotspot de Biodiversidade Global; p. 41-52 *In* C. F. D. Rocha, H. G. Bergallo, M. Van Sluys, and M. A. S. Alves (ed.) Biologia da Conservação. São Carlos: RiMa Editora.

Machado, A. B. M., C. S. Martins, and G. M. Drummond. 2005. Lista da fauna brasileira ameaçada de extinção. Belo Horizonte: Fundação Biodiversitas. 160 p.

Manne, L. L., T. M. Brooks, and S. L. Pimm. 1999. Relative risk of extinction of passerine birds on continents and islands. Nature 399(6733): 258-261.

Mello-Junior, T. A., L. G. M. Mendes, and M. M. Coelho. 1998. Range extension for Itatiaia Spinetail *Oreophylax moreirae* with comment on its distribution. Cotinga 10: 68-70.

Myers, N., R. A. Mittermeier, C. G. Mittermeier, G. A. B. Fonseca, and J. Kent. 2000. Biodiversity hotspots for conservation priorities. Nature 403(6772): 853-858.

Parker III, T. A., D. F. Stotz, and J. W. Fitzpatrick. 1996. Ecological and distributional databases; p. 115-436 *In* D. F. Stotz, J. W. Fitzpatrick, T. A. Parker III, and D. K. Moskovits (ed.). Neotropical Birds: ecology and conservation. Chicago: The University of Chicago Press.

Pimm, S. L. and R. A. Askins. 1995 Forest losses predict bird extinctions in eastern North America. Proceedings of the National Academy of Sciences of the United States 92(20): 9343-9347.

Ridgely, R. S. and G. Tudor. 1989. The Birds of South America: The Oscine passerines. Austin: University of Texas Press, 516 p.

Ridgely, R. S. and G. Tudor. 1994. The Birds of South America: The Suboscine passerines**.** Austin: University of Texas Press, 814 p.

Rocha, C. F. D., H. G. Bergallo, M. A. S. Alves, and M. Van Sluys. 2003. A biodiversidade nos grandes remanescentes florestais do Estado do Rio de Janeiro e nas restingas da Mata Atlântica. São Carlos: RiMa Editora. 156 p.

Scott, D. A. and M. de L. Brooke. 1985. The endangered avifauna of southeastern Brazil: a report on the BOU/WWF Expeditions of 1980/81 and 1981/82; p. 115-139 *In* A.W. Diamond and T.E. Lovejoy (ed.) Conservation of tropical forest birds. Cambridge: International Council for Bird Preservation (Technical Publication 4).

Scott, D. A. and M. de L. Brooke. 1993. Rediscovery of the Grey-winged Cotinga *Tijuca condita* in south-eastern Brazil. Bird Conservation International 3(1): 1-12.

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Table 1. Bird species recorded during fieldwork at each of the four montane Atlantic Forest sites. Each site label includes the geographic coordinates and elevation of the mist nets. We include species detected around these sites and above 1200 m. Species presence at a site is indicated by: C = capture, V = visual, and A = auditory, and absence by a dash. IUCN (G) (IUCN 2007), Brazil (N) (Machado et al. 2005) and Rio de Janeiro (R) (Alves et al. 2000) Red Lists status of the species are indicated by EN (Endangered), VU (Vulnerable), NT (Near Threatened). In the regional list (R), PE = probably endangered. The systematic order is according to CBRO (2008). End - endemic to the Atlantic forest according to Bencke *et al.* (2006). REBIO = Biological Reserve.

Species	Threat Status			REBIO Araras	Fazenda Itatiba	Fazenda Boa Esperança	Desengano State Park
	G	N	R				
Solitary Tinamou *Tinamus solitarius* (Vieillot, 1819) End	NT		EN	-	-	-	A
Brown Tinamou *Crypturellus obsoletus* (Temminck, 1815)				-	-	A	A
Spot-winged Wood-quail *Odontophorus capueira* (Spix, 1825) End			PE	-	-	-	A
Turkey Vulture *Cathartes aura*				-	-	-	V

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(Linnaeus, 1758) Black Vulture *Coragyps atratus*				-	-	V	V
(Bechstein, 1793) White-tailed Hawk *Buteo albicaudatus*				A	-	-	-
Vieillot, 1816 Yellow-headed Caracara *Milvago chimachima*				-	-	V	-
(Vieillot, 1816) Collared Forest-falcon *Micrastur semitorquatus*				A	-	-	A
(Vieillot, 1817) Plumbeous Pigeon *Patagioenas plumbea*				A	V	A	A
(Vieillot, 1818) Pileated Parrot *Pionopsitta pileata*			PE	V	-	-	-
(Scopoli, 1769) End Scaly-headed Parrot *Pionus maximiliani*				A	-	V	-
(Kuhl, 1820) Squirrel Cuckoo *Piaya cayana*				-	-	V	-
(Linnaeus, 1766) Rusty-barred Owl *Strix hylophila*	NT			A	-	-	-
Temminck, 1825 End Ferruginous Pygmy-owl *Glaucidium brasilianum*				-	-	-	A
(Gmelin, 1788) Band-winged Nightjar *Caprimulgus longirostris*				-	-	-	V
Bonaparte, 1825 White-collared Swift *Streptoprocne zonaris*				-	-	-	V
(Shaw, 1796) Biscutate Swift *Streptoprocne biscutata*				V	-	-	-
(Sclater, 1866) Sick's Swift *Chaetura meridionalis*				-	-	-	V
Hellmayr, 1907 Scale-throated Hermit *Phaethornis eurynome* (Lesson,				C, V	C	C	V
1832) End White-vented Violet-ear *Colibri serrirostris*				C, V	-	-	-
(Vieillot, 1816) Plovercrest *Stephanoxis lalandi*				C, V	-	-	-

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(Vieillot, 1818) End							
White-throated Hummingbird							
Leucochloris albicollis (Vieillot, 1818) End				-	-	V	-
Brazilian Ruby							
Clytolaema rubricauda (Boddaert, 1783) End				C, V	-	C	V
Surucua Trogon							
Trogon surrucura Vieillot, 1817 End				-	-	-	A
Red-breasted Toucan							
Ramphastos dicolorus Linnaeus, 1766 End				V, A	-	-	-
Yellow-eared Woodpecker							
Veniliornis maculifrons (Spix, 1824) End				C	-	-	-
Giant Antshrike							
Batara cinerea (Vieillot, 1819)				-	-	-	A
Large-tailed Antshrike							
Mackenziaena leachii (Such, 1825) End				-	-	-	A
Rufous-capped Antshrike							
Thamnophilus ruficapillus Vieillot, 1816				-	C	-	-
Variable Antshrike							
Thamnophilus caerulescens Vieillot, 1816				V	-	-	-
Rufous-backed Antvireo							
Dysithamnus xanthopterus Burmeister, 1856 End				A	-	-	-
Bertoni's Antbird							
Drymophila rubricollis (Bertoni, 1901) End				-	-	C	-
Rufous-tailed Antbird							
Drymophila genei (Filippi, 1847) End		NT		A	-	C	A
Dusky-tailed Antbird							
Drymophila malura (Temminck, 1825) End				-	V, A	-	-
Variegated Antpitta							
Grallaria varia (Boddaert, 1783)				A	-	-	-
Serra do Mar Tapaculo							
Scytalopus notorius Raposo, Stopiglia, Loskot & Kirwan, 2006 End				A	A	A	A
Rufous-tailed Antthrush							
Chamaeza ruficauda (Cabanis & Heine, 1859) End				A	-	A	-
Olivaceus Woodcreeper							

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Sittasomus griseicapillus (Vieillot, 1818) Itatiaia Tristletail				V	-	C	A
Oreophylax moreirae (Miranda-Ribeiro, 1906) End Rufous-capped Spinetail				-	C	-	-
Synallaxis ruficapilla Vieillot, 1819 End Spix's Spinetail				-	-	C	C
Synallaxis spixi Sclater, 1856 Buff-browned Foliage-gleaner				C, V	A	-	C
Syndactyla rufosuperciliata (Lafresnaye, 1832) Sharp-tailed Streamcreeper				C	-	-	-
Lochmias nematura (Lichtenstein, 1823) Grey-hooded Flycatcher				-	-	-	V, A
Mionectes rufiventris Cabanis, 1846 End Ochre-faced Tody Flycatcher				C	-	C	V
Poecilotriccus plumbeiceps (Lafresnaye, 1846) Highland Elaenia				A	-	-	-
Elaenia obscura (d'Orbigny & Lafresnaye, 1837) Mottle-cheeked Tyrannulet				C	-	-	-
Phylloscartes ventralis (Temminck, 1824) Serra do Mar Tyrannulet				C	-	-	V
Phylloscartes difficilis (Ihering & Ihering, 1907) End Bran-colored Flycatcher		NT		-	V	-	-
Myiophobus fasciatus (Statius Muller, 1776) Cliff Flycatcher				-	C	-	-
Hirundinea ferruginea (Gmelin, 1788) Blue-billed Black Tyrant				-	-	V	-
Knipolegus cyanirostris (Vieillot, 1818) Shear-tailed Gray Tyrant				C, V	C, V	C	-
Muscipipra vetula (Lichtenstein, 1823) End Swainson's Flycatcher				V	C, V	V	-
Myiarchus swainsoni Cabanis & Heine, 1859 Grey-hooded Attila				-	C	-	-
Attila rufus (Vieillot, 1819) End Hooded Berryeater				-	-	V	-

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Carpornis cucullata (Swainson, 1821) End Bare-throated Bellbird	NT			A	-	-	A
Procnias nudicollis (Vieillot, 1817) End Black-and-gold Cotinga	VU		PE	-	V	-	A,V
Tijuca atra Ferrusac, 1829 End Grey-winged Cotinga		NT		A	A	A	A
Tijuca condita Snow, 1980 End Pin-tailed Manakin	VU	VU	PE	V, A	-		-
Ilicura militaris (Shaw & Nodder, 1809) End Blue Manakin				-	-	C	-
Chiroxiphia caudata (Shaw & Nodder, 1793) End Greenish Schiffornis				-	-	C	-
Schiffornis virescens (Lafresnaye, 1838) End Rufous-browed Peppershrike				-	-	-	A
Cyclarhis gujanensis (Gmelin, 1789) Rufous-crowned Greenlet				A	-	V	-
Hylophilus poicilotis Temminck, 1822 End Yellow-legged Thrush				A	-	-	-
Turdus flavipes Vieillot, 1818 Rufous-bellied Thrush				V	V	C	A
Turdus rufiventris Vieillot, 1818 Pale-breasted Thrush				V	-	C	A
Turdus leucomelas Vieillot, 1818 White-necked Thrush				A	-	-	-
Turdus albicollis Vieillot, 1818 Hellmayr's Pipit				-	V	-	-
Anthus hellmayri Hartert, 1909 Cinnamon Tanager				A	-	-	-
Schistochlamys ruficapillus (Vieillot, 1817) Chestnut-headed Tanager				C	-	-	-
Pyrrhocoma ruficeps (Strickland, 1844) End Ruby-crowned Tanager				-	V	-	-
Tachyphonus coronatus (Vieillot, 1822) End Azure-shouldered Tanager				-	-	V	V

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Thraupis cyanoptera (Vieillot, 1817) End	NT			-	-	V	-
Diademed Tanager *Stephanophorus diadematus* (Temminck, 1823)				C	V	V	-
Brassy-breasted Tanager *Tangara desmaresti* (Vieillot, 1819) End				-	-	C	-
Rufous-collared Sparrow *Zonotrichia capensis* (Statius Muller, 1776)				C	C	V	A
Uniform Finch *Haplospiza unicolor* Cabanis, 1851 End				C	-	C	C
Bay-chested Warbling-finch *Poospiza thoracica* (Nordmann, 1835) End				C	C, V	V	V
Buffy-fronted Seedeater *Sporophila frontalis* (Verreaux, 1869) End	VU	VU	EN	A	-	-	-
Green-Winged Saltator *Saltator similis* d'Orbigny & Lafresnaye, 1837				C, V, A	A	V	A
Golden-crowned Warbler *Basileuterus culicivorus* (Deppe, 1830)				-	-	C	-
White-browed Warbler *Basileuterus leucoblepharus* (Vieillot, 1817) End				V	-	-	-

Table 2. Elevation data (in m) for species recorded in the current study with altitudinal range to elevations more or less than 200 m higher than those published in Parker et al. (1996), and others references. Blank cells mean no information and not listed.

Species	Current study	Parker et al. (1996)	Buzzeti (2000)	del Hoyo et al. (1997)	del Hoyo et al. (2003)	del Hoyo et al. (2004)	Ridgely and Tudor (1989)	Ridgely and Tudor (1994)	Scott and Brooke (1985)
Tinamus solitarius	1610	1200	0-1500						0-1200
Pionus maximiliani	1650	1300	0-1700	Up to 1500					0-1300
Veniliornis maculifrons	1650	1300	0-500						0-1300
Drymophila malura	1809	950			To 1900			To 1100	1100
Oreophylax moreirae	1809	2000			1850-2800			2000-2800	1950-2250
Synallaxis	1610	1400	0-1500		0-1400			Up to at	600-1400

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LISTS OF SPECIES

Species	Current study	Parker et al. (1996)	Buzzeti (2000)	del Hoyo et al. (1997)	del Hoyo et al. (2003)	del Hoyo et al. (2004)	Ridgely and Tudor (1989)	Ridgely and Tudor (1994)	Scott and Brooke (1985)
ruficapilla								least 1400	
Procnias nudicollis	1809	1150	0-1150			0-1000		About 1000	0-1150
Ilicura militaris	1490	1250	0-1500			0-1200		0-1200	650-1250
Schistochlamys ruficapillus	1650	1100					Below 1500		700-1100
Pyrrhocoma ruficeps	1809	1500					About 1100		1020-1140
Tachyphonus coronatus	1610	1200	0-1500				To about 1200		50-1170
Thraupis cyanoptera	1490	1200	0-1700				300-1600		700-1620
Saltator similis	1809	1250	0-1700				To about 1200		630-1960